THE FIELDS INSTITUTE

FOR RESEARCH IN MATHEMATICAL SCIENCES

ABSTRACTS 1.2

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Non-commutative sheaf cohomology and Vogel cohomology over Koszul quiver algebras (25-30 min)

This is a report on joint work with Roberto Martinez Villa. We show that, (non-commutative) sheaf cohomology of Koszul modules over a Koszul quiver algebra is naturally isomorphic to Vogel cohomology of the Koszul-dual modules over the Koszul-dual algebra. As an application, we shall give a new proof of non-commutative Serre duality.